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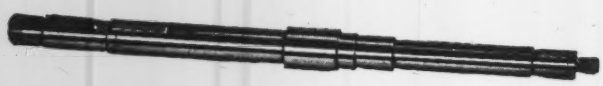
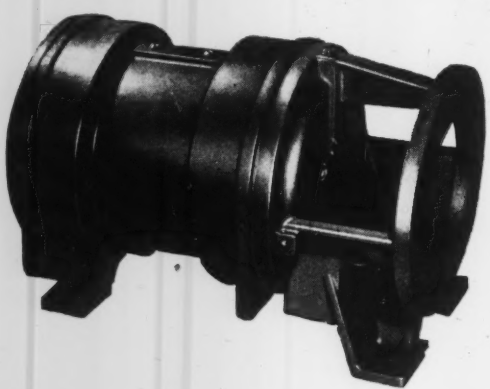
Two Clues

to Why A-C's Smooth-Running Electrifugal Pump is the Finest of its Kind!



Clue No. 1: One-piece shaft carries motor-rotor and pump-impeller on ball bearings—assures alignment and smooth operation. Cast bronze sleeve shields it from liquid being pumped.



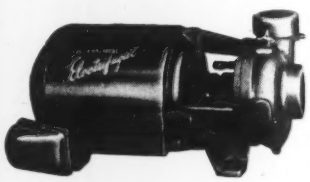
CLUE No. 2: One-piece iron casting forms motor yoke, the bearing housing, pump bracket and feet—gives stability to entire unit. Saves 33% space, lessens chance of strain on parts or piping.

FINE ENGINEERING adds up to quality and value—and that's what Allis-Chalmers "Electrifugal" Pump now offers you! Entire unit is designed for efficient, dependable service—gives you maximum protection against dangers of abnormal wear, leakage, corrosion, vibration. For further information call our nearby office, or write ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN. A 1929

HEAR THE BOSTON SYMPHONY: *Every Saturday Evening, American Broadcasting Co.*

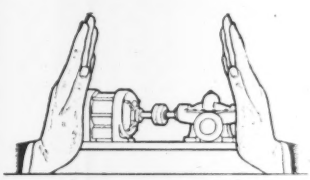
OIL COMPANY BUYS 100 *Electrifugal* PUMPS

TO MOVE volatile liquids such as gasoline, kerosene, naphtha from tank-car to storage tank, and into trucks—a large petroleum company depends on A-C Electrifugal Pumps. Try-out of first 15 pumps was so successful (big test: surge-shock when valves snap shut!), 100 units were ordered, more later re-ordered.

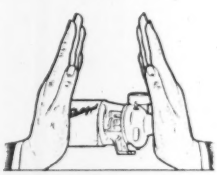


Electrifugal Capacities: 15 to 1600 gpm—heads up to 500 feet.

SQUEEZE PLAY CUTS PUMP SPACE 33%



How can we couple a pump and motor together *better*—to save space, provide stability, rigid alignment?



Electrifugal Design assures alignment and smooth operation, cuts space 33% — gives you greater pumping efficiency for your money!

ALLIS-CHALMERS *Electrifugal* PUMPS

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • DECEMBER 20, 1945 • VOLUME 135 • NUMBER 25

To place home construction under priority control

President Truman approves reconversion directors' plan for controls—Move seen as channeling 50 percent of construction materials into small housing field

Seeking to relieve the nation-wide shortage of housing, President Truman last week approved a three-point program that would place ceilings on sales prices of homes and priorities on building materials.

Reestablishment of the priorities system, urged by John W. Snyder, War Mobilization and Reconversion Director, is planned to channel about 50 percent of all building materials into the construction of housing units costing $10,000 or less. These controls are expected to go into effect this week. Ceiling prices on building materials are already in effect but legislation will be required to apply them to complete houses.

In announcing the program at a Washington press conference, the President revealed he had appointed Wilson Wyatt, a former mayor of Louisville, Ky., as housing expediter, under the OWMR.

President's program

The President's program, adopted in full from a report on housing submitted to him by Mr. Snyder Dec. 12, proposed three major steps:

1. Establishment of a program for speeding up release of surplus housing units and building materials, held by the government. This step makes immediately available to state and local communities surplus property including Army and Navy barracks and dormitories, and "some" temporary housing built for war workers and not now needed at its present site. Such a program has been prepared and is ready to operate, the President said.

2. Preparation of regulations reestablishing priorities on building materials. In general these regulations will set up priorities for single or multiple dwelling housing units costing $10,000 or less. The regulation will also provide preference for veterans in renting or purchasing such housing. This regulation is to be issued under the provisions of the Second War Powers Act.

3. Establishment of ceiling prices on old and new housing.

States take action

The availability of government surplus housing materials and structures such as Army and Navy cantonments has already been the subject of consideration by the states. In New York State, Governor Thomas E. Dewey recently completed arrangements for the State Housing Authority to take over an Army establishment at Fox Hills, Staten Island, and a Coast Guard station at Manhattan Beach, Brooklyn, for conversion to housing facilities for veterans and their families.

The Real Estate Board of Sacramento, Cal., recently announced a resolution favoring postponement of government-sponsored construction to permit allocation of labor and materials to the home-building field. Similar action has been reported elsewhere.

Mr. Snyder's report to the President—basis of the recommendations made by Mr. Truman—estimated that more than a million families are now living "doubled up" with others because of the acute housing shortage. He said that despite an abnormal rise in home construction during the past few months—from $56,000,000 worth of work in June to $125,000,000 in December—the level of construction is still "extremely low" in relation to needs. Federal building experts had estimated that about 500,000 home units should be built in 1946 to take care of the initial home demand.

The report estimated that releases of Army-Navy housing facilities might make 100,000 units available in the next few months.

Establishment of price controls on home sales will be based on the actual costs of construction, the "fair market value" of the land, and a margin of profit upon comparable units for the calendar year 1941, Mr. Snyder said.

Mr. Snyder cited "energetic action" on his agency's six point program for aid to the construction industry (*ENR* Nov. 8, vol. p. 621), and said it had resulted in increased production of

(*Continued on page* 2)

Indianapolis finances slum-clearance

A slum clearance plan for Indianapolis, Ind., involving no federal aid was described to the Senate Banking and Currency Committee in Washington recently by Paul L. McCord, chairman of the commissioners of the city's Redevelopment Department.

Under authority granted by the state's General Assembly last March, Indianapolis has set up the Redevelopment Department, with power to levy taxes but not to issue bonds. By adding 10 cents to the prevailing tax rate of $3.45 per $100 for two years, and half this amount thereafter, a fund is being created which will be used to acquire blighted areas, clear them, plan for their redevelopment, and then offer them for sale to private enterprise.

The city's contribution is limited to these services, and does not include any form of subsequent tax exemption.

As each project is completed, returns from the sale of the land will be returned to the special fund and will be available for use in other areas. Ample safeguards are provided to protect the public interest in the designation of the areas to be redeveloped and to assure cooperation with other municipal agencies controlling parks, flood control, thoroughfares, utilities, and other services. The department must follow specified provisions for appraisal and the determination of prices, but is also given the right of eminent domain for use if necessary.

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Highways—Additions to the state's farm-to-market road system totalling 5,762 miles are planned in *Oklahoma*. . . . Traffic counts in *Pennsylvania* show an increase of 38 percent during September. . . . *Kentucky* said it had collected $11,445,000 for road funds in the first eight months of 1945—a million dollars more than had been estimated for the period. . . . *Akron, Ohio*, discussed possibility of building a new viaduct over the Ohio canal to eliminate traffic jams. . . . *Missouri* warned its taxpayers that their road dollars won't produce as much highway work as previously, owing to increased costs. . . . *Illinois* has completed allocation of $10,000,000 to townships for road construction. . . . *Portland, Ore.*, considered plans for a $2,000,000 viaduct from the end of the Hawthorne Bridge to Seventh Ave. . . . *Maine's* highway department announced plans for a $2,000,000 bridge over the Kennebec River to replace the existing 2-lane structure.

Water Supply — *Cincinnatti, Ohio*, authorized expenditure of $2,384,000 for improvements, to include new 36-in. and 42-in. main and a pumping station. . . . *Chattanooga, Tenn.*, considered a plan to cut its water costs by $20,000 per year by paying for the use of fire hydrants rather than renting water mains serving the hydrants. . . . *Little Rock, Ark.*, considered purchase of water and sewerage facilities of the Arkansas Ordnance Plant. . . . *Charlotte, N. C.*, will call a special election on a $5,974,000 bond issue for waterworks improvements and allied matters.

Construction—*Santa Monica, Cal.*, will build a $600,000 "fliers' club" at the municipal airport there. . . . The Frozen Foods Division of the Bridgeford Co., will build a $1,000,000 quick-freeze plant at *Ontario, Ore.* . . . The *University of Tulsa, Okla.*, will build two $500,000 dormitories. . . . The Broadmoor Hotel, *Colorado Springs, Colo.*, will spend $1,000,000 on new construction. . . . International Harvester Co. of Canada announced a $5,000,000 construction program at *Hamilton and Chatham, Ont.* . . . Philip Carey Mfg. Co., of *Cincinnati, Ohio*, will spend $5,000,000 in plant construction and modernization. . . . The Ohio Rubber Co. plans a $1,000,000 plant at *Long Beach, Cal.*

Miscellany—*Dallas, Ft. Worth, San Antonio, El Paso* and *Brownwood, Tex.*, have adopted the sanitary landfill system of garbage disposal. . . . The New England Council reported that New England construction value dropped from $440,000,000 in 1941 to $89,000,000 in 1944. . . . A move to inaugurate a 5-year, $6,000,000 civic improvement program is being urged by *Seattle, Wash.*, planning groups. . . . *New York City* will prepare plans for a $4,500,000 municipal office building and additions and alterations to the Morrisania Hospital with FWA funds recently allotted. . . . *Baltimore, Md.*, added seven men to its traffic engineering department to plan elimination of congestion. . . . The city-county planning commission at *Rockford, Ill.*, has recommended appropriation of $10,000 for employment of a planning engineer.

Housing Under Priorities

(*Continued from p.* 1)

needed materials, including cast-iron soil pipe, bricks, and other materials.

"All this will help," he said, "but some materials still will remain scarce for months to come. Inventories are being watched to prevent hoarding and assure prompt distribution of scarce materials. Widening of the controls is being studied." Neither the President nor Mr. Snyder suggested detailed legislation that congress may be required to act upon to implement the program, but the recently-introduced Patman Bill (*ENR* Nov. 29, vol. p. 710), which would establish the office of a Housing Director and provide for price-controls, seems in line with the suggested program.

In a letter to Mr. Wyatt, Mr. Truman directed the new housing expediter to: "Search out all bottlenecks at whatever level of industry or government . . . try to break those bottlenecks . . . and make the machinery of housing production run as smoothly and speedily as possible."

M. W. Straus named Reclamation director

Michael W. Straus, former assistant secretary of the Department of the Interior, has been named commissioner of the Bureau of Reclamation by President Truman. He took office on Dec. 17, succeeding Commissioner Harry W. Bashore, who resigned after 39 years of service with the bureau.

M. W. Straus

Commissioner Straus was born in Chicago in 1897 and attended the University of Wisconsin. In the first World War he enlisted in the Navy. After the war he entered newspaper work, eventually going to Washington as a press association correspondent.

Mr. Straus entered Government service in 1933 as an assistant to the Federal Public Works Administrator. He served the War Production Board for a year as director of the War Production Drive Labor-Management Committee.

He returned to the Interior Department in 1943 and in March of that year was nominated by President Roosevelt as First Assistant Secretary of the Interior and confirmed by the Senate. Since then, by delegation of Secretary Ickes he has had immediate supervision of the Bureau of Reclamation, the Bureau of Mines, the Geological Survey, and the Petroleum Conservation Division—all western resource development agencies of the department.

Former Commissioner Bashore has established an outstanding record in his long service in all branches of the Bureau of Reclamation. Under his guidance the bureau was reorganized on a regional basis and investigation on 15 major river basins, including that of the Missouri River was undertaken and carried forward.

Commissioner Bashore submitted his resignation to Secretary Ickes last September after reaching the optional retirement age and resisted efforts to cause him to reconsider. He has declared that he wishes to care for personal matters which he had been forced to lay aside because of his heavy duties.

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Tripartite pact signed for Chicago's $50 million Congress St. expressway

City, state, county to share equally in cost of right-of-way and construction. Engineering costs to be borne separately

What is believed to be one of the most workable plans for joint financing and collective construction of large public works projects is embodied in a tripartite agreement signed recently by the Illinois State Department of Public Works and Buildings, the city of Chicago and Cook County, Ill. The agreement covers the financing of right-of-way and construction costs for the 8-lane Congress Street Expressway, to be built from Field Drive in Grant Park, along the general line of Congress St. to the city limits at Austin Blvd. (*ENR*, Apr. 19, v. p. 574).

Signing of the agreement—the first of its kind in Illinois—is significant since it recognizes the principle of joint responsibility of government agencies for the construction of modern highways in urban areas. Moreover, it conforms to one of the new policies contained in the Federal Aid Highway Act of 1944 which recognizes the need for financial assistance to metropolitan areas faced with similar problems.

Terms listed

Briefly, the terms of the agreement are:

(1) The city, county and state jointly will undertake the construction of the expressway, each party assuming one-third of the total cost of right-of-way and contract construction, exclusive of engineering costs.

(2) Each party is to provide the construction plans and assume all engineering costs incurred after the date of the agreement (Nov. 26, 1945) for that portion of the work which it places under contract. Construction plans may be prepared by any one of the parties for either of the other two at a rate of 4 percent of the contract construction costs.

(3) The portions of the work to be undertaken by each party to the agreement will be agreed upon mutually by all three parties, each letting contracts for its portion of the work. General design of all portions of the project is to be jointly approved.

(4) Total cost of right-of-way includes the cost of right-of-way acquired by the city, with the approval of the state, prior to the date of the agreement, plus the costs of all right-of-way secured thereafter for completion of the project. Right-of-way costs include only the cost of land, buildings and damages.

(5) Any part of the construction costs paid by the Chicago Rapid Transit Company is to be credited equally between the city, state and county, each of which will keep accurate records of all costs involved to be used as a basis for the final division of costs.

Present plans call for 1 1/3 miles of the 8-mile expressway to be built by the city, 2 2/3 miles by the state and 4 miles by the county. The city's portion extends from Field Drive to Canal St., including a four-lane twin bascule bridge over the south branch of the Chicago River, and a four-block section between Desplaines and Peoria Streets. Estimated cost of these two sections, exclusive of right-of-way, is $5,525,000.

Cook County will build the expressway from Canal St. to Desplaines St. and from Sacramento Blvd. to the city limits at Austin Blvd. These two sections will cost about $8,245,000, exclusive of right-of-way.

The State of Illinois will build from Peoria St. to Sacramento Blvd. at an estimated cost of $7,875,000, exclusive of right-of-way.

In general, each of the three agencies will purchase the major portion of the right-of-way for those sections of the expressway assigned to them for construction. The city will purchase about $9,696,000 worth of right-of-way, most of which already has been acquired. The county will spend $6,975,000 and $7,346,000 will be spent by the state for that purpose.

Bids for the first construction contract, the erection of two overhead bridges at Halsted St. and at Peoria St. will be asked shortly after Jan. 1, 1946. Completion of the entire eight miles of expressway is expected to take from three to four years.

Virgil E. Gunlock is commissioner of Subways and Superhighways, Chicago; Wesley W. Polk is chief highway engineer for the Illinois Department of Public Works and Buildings; and George A. Quinlan is superintendent of highways for Cook Co., Ill.

Directs sanitation for Greyhound restaurants

Lt. Col. Edward S. Hopkins will join the Greyhound Post Houses Jan. 1 as director of the sanitary engineering division. His appointment is part of the program for the post-war expansion of a chain of 62 roadside restaurants now operated in 18 states to serve the Greyhound Bus Line.

Col. E. S. Hopkins

Colonel Hopkins, who is scheduled for release from active duty soon, was the officer in charge of sanitation for all camps, posts, and stations of the Third Service Command, which includes Pennsylvania, Maryland and Virginia. He has had wide experience in the supervision of mess halls, kitchens and community restaurant sanitation.

Immediately prior to the war, Colonel Hopkins was filtration engineer for the city of Baltimore. He was a part time member of the faculties of John Hopkins School of Hygiene and Western Maryland College. He is the author of two books and numerous papers.

Educated at John Hopkins, University of Maryland and Georgetown University, Colonel Hopkins is a member of the American Institute of Chemical Engineers and of the American Water Works Association.

Progress on Barrier Dam project in Alberta

Construction of Barrier Dam, owned by the Calgary Power Co., on the Kananaskis River west of Calgary, Alta., is progressing under a contract to Fred Mannix & Co., Ltd., Canadian associate of Morrison-Knudsen Co., Inc., of Boise, Idaho.

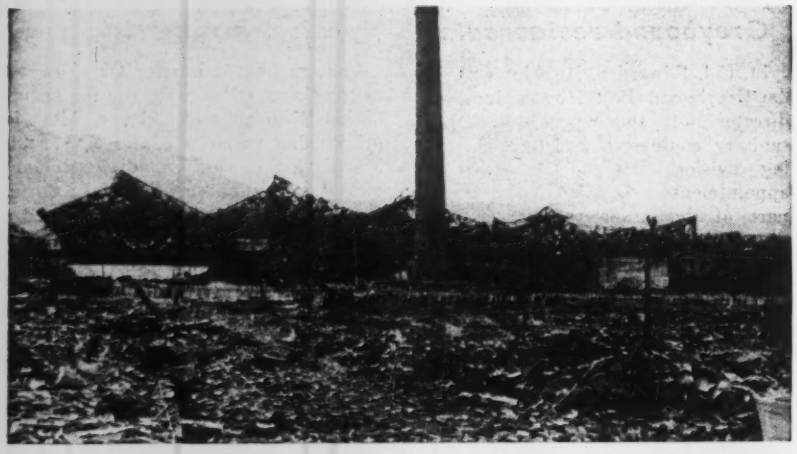
The structure, a project designed to deliver electricity at low rates to Alberta farmers, will be an earth-fill dam involving about a million cu. yds. of excavation, with concrete spillway, power intake, and a power-house requiring 11,000 cu. yd. of concrete. It will impound 10,125 ac-ft of water in a 675-acre reservoir.

Maximum height of the dam will be 125 ft., with a crest length of 1200 ft. To divert the Kananaskis River during construction, a cofferdam with a rock-fill crib 20 x 32 x 250 ft. will be erected, allowing a maximum discharge of 8,000 cfs. Stripping is being done on the river bank to prepare for erection of the impervious clay core. The natural material will be left in place, graded and compacted for the pervious slopes of the earth dam.

Barrier Dam, the fifth owned by Calgary Power Co., is scheduled for completion by Nov. 1, 1946. B. A. Monkman, resident engineer, and E. Smith, superintendent for Calgary Power, are working in co-operation with George Vogan, who is chief engineer for Mannix. Superintendent in charge is James McMartin.

Atomic Bomb Damage at Nagasaki

The appalling devastation of the industrial section of Nagasaki, Japan, resulting from the atomic bomb explosion is vividly portrayed by these photographs of the damaged area, taken by H. W. Richardson of Engineering News-Record, *recently returned from a 4-month assignment in the Western Pacific. These views supplement his radio report published in the news pages on Sept. 27, 1945.*



Above—the Mitsubishi steel works looks as if a giant had shoved the buildings over at the eave line. Standing unscathed amid the ruins is one of the ten reinforced concrete stacks that survived the concussion.

At left—the blast concussion travelled 1½ mi. up the valley with sufficient force to topple the wood-truss building at right and wrinkle up a sheet-steel gasholder. Rounded poles at left seemingly suffered no damage.

Nagasaki's industrial district lies in a long, narrow valley extending for three miles northward from the head of Nagasaki Bay. In the lower end of the valley stood the huge Mitsubishi steel works; at the opposite end was the big Mitsubishi-Urakawi naval torpedo plant. The bomb, exploding high between the two plants, wiped both off the map along with everything nearby and in between. Center of the atomic blast was about 2,500 ft. from the nearest part of the steel mill and 4,500 ft. from the torpedo plant. Bomb damage also extended through the lower part of the main business district adjoining the mouth of the valley.

Three types of damage were noted. First, and most devastating, was from the concussion blast; second, from the super-heat of the bomb, which burned out interiors of parts of heavy structures not otherwise completely wrecked; and third, from fires started from debris blown down upon existing fires. Casualties at Nagasaki were 40,000 killed and missing and 80,000 wounded, the entire population of the valley at the time of the blast.

Heavy reinforced-concrete structures,

The massive brick walls of this church were about 4 ft. thick, but gave way under the blast. Collapse of the walls toppled the church's concrete dome into the center of the building without even cracking the dome. Direction of the concussion waves is clearly evidenced by the longitudinal walls left standing here.

Above: Slight shattering is the only exterior evidence of damage to a concrete hospital and medical school, some 2,000 ft. from blast-center. Buildings were designed as earthquake-proof structures by an American architect. However, the interiors of the buildings were burned out by the bomb superheat.

especially the high stacks in the steel mill, offered greatest resistance to the blast. In fact, all cylindrical shapes, including wooden poles, seemed to deflect the concussion wave because of their curved surfaces. Ordinary brick and tile buildings disintegrated into rubble, while frame structures simply disappeared into the cloud of dust that rose above the doomed city.

An area of roughly within a half-mile radius around the blast center is completely demolished, including all types of structures. Beyond that, damage lessens according to construction. Ordinary Jap houses and stores were wrecked at a distance up to two miles, while large light buildings, such as barracks, were knocked down at distances as much as five miles from the center.

At right, above, part of the stone-revetted Urakawi River bed (foreground) was choked with debris. The herringbone pattern of the dry masonry wall is peculiar to Japan and Okinawa. Left —Probably because it happened to be oriented longitudinally with the blast wave, this plate girder railroad bridge across the winding river was undamaged. Concrete bridges such as the one in the background, also stood up. In general, heavy reinforced-concrete structures seem to have offered greatest resistance to the blast. All cylindrical shapes seemed to deflect the concussion waves because of their curved surface.

Senate increases construction funds provided in first deficiency measure

Adds $200 million before passing house-approved bill, raising total by nearly 50 percent. Includes funds for veterans' housing

Before passing the First Deficiency Bill (H.R. 4805) for 1946, the Senate Dec. 15 increased funds allowed for planning and construction to $633,530,000—a rise of nearly 50 percent. As passed by the House Nov. 30 (*ENR*, Dec. 6, vol. p. 751) the bill contained $434,000,000 for those two purposes.

The largest increase by the Senate was in the fund for the National Housing Agency for providing veterans' housing. The House had approved $24,500,000 for that work. The Senate—in view of the President's request of last week that major action be taken to provide sufficient housing for veterans (see p. 1 of this issue)—increased that fund to $191,900,000. This money is expected to be used in dismantling and re-erecting elsewhere about 100,000 temporary war housing units.

The Senate also doubled funds provided for the Bureau of Community Facilities of the Federal Works Agency, making that item $25,000,000. The money is earmarked for assistance to local public works planning groups.

Two other increases for the FWA were also made. A sum of $5,575,000 for the Public Buildings Administration for a Federal Office Building at Nashville, Tenn., was inserted as an entirely new item, and the amount of money for public works construction in the Virgin Islands was increased from $554,000 to $1,878,420.

A $25,000,000 appropriation for the Public Roads Administration was approved without increase. This money will be used to meet requests of the state highway departments in accordance with the federal highway act of 1944.

Army fund becomes $125,175,000

Funds for the Corps of Engineers were raised to $125,175,000, the net increase totalling $2,900,000. The Senate saw fit to add $3,000,000 for the Conemaugh River Reservoir in Pennsylvania; $1,000,000 for the Hulah Reservoir in Oklahoma, and $400,000 for the mouth of the Sangamon River in Illinois. However, it struck out the $1,500,000 item the House had approved for Mansfield Hollow Reservoir in Connecticut.

A breakdown of the money approved by the Senate for the Army Engineers shows that $84,659,000 is earmarked for general flood control and $25,516,000 for rivers and harbors work. A list of the largest of the projects to be carried out with this money was given in *ENR* Dec. 6, vol. p. 751.

$85,409,200 for reclamation

For the Bureau of Reclamation the Senate provided a total of $85,490,200, which is a net increase of $8,285,200 over the amount that the House had favored. The Senate-approved total is made up as follows: $46,712,000, general construction fund; $22,042,000, reclamation fund; $11,402,300, Missouri River Basin; $3,000,000, All-American canal; $1,335,000, Fort Peck Project; and $1,000,000, Colorado River development fund.

The increases for the bureau include: $1,600,000 for general investigations, salaries and expenses, and $1,800,000 additional for the Davis Dam fund to permit construction of the Phoenix-Tucson transmission line. Other increases are: Kings River project, $197,000; Colorado-Big Thompson project, $1,500,000; Columbia Basin project, $450,000; Fort Peck, $855,000; and the Missouri River Basin, $1,133,200.

Other increases made by the Senate included the addition of $1,650,000 for construction work at the White House, and $351,600 for planning and surveys by the Geological Survey.

Calendar of Meetings

NATIONAL

American Road Builders' Association, 1946 annual meeting and convention, Stevens Hotel, Chicago, Ill., Jan. 14-17.

American Society of Civil Engineers, annual meeting, Commodore Hotel, New York, N. Y., Jan. 16-18.

Highway Research Board, Oklahoma City, Okla., Jan. 25-28.

Associated Equipment Distributors, 27th annual meeting, Edgewater Beach Hotel, Jan. 28-31.

American Association of State Highway Officials, Oklahoma City, Okla., Jan. 29-Feb. 1.

REGIONAL

Illinois Contractors Association, Springfield, Ill., Jan. 7-8.

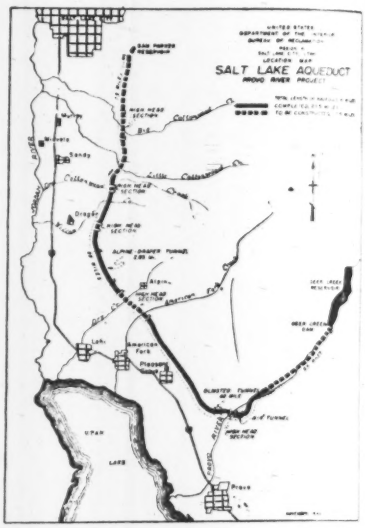
Kansas Contractors Association, Kansas City, Mo., Jan. 10-11.

Associated General Contractors of America, Inc., Kansas City Chapter, Kansas City, Mo., Jan. 16.

New bids called for on Salt Lake aqueduct

Forecasting possible delivery of water by next year through the 41-mi. Salt Lake Aqueduct, a feature of the Provo River Project in Utah, Regional Director F. O. Larson of the Bureau of Reclamation has called for bids on 4½ mi. of high-head sections in five locations.

Plate steel pipe lines and concrete structures will link sections of the aqueduct across Provo River, American Fork Creek, Dry Creek, a stretch north of the



Alpine-Draper tunnel, and Dry Cottonwood Creek. The work is being advertised under two sets of specifications, one for fabrication and delivery of pipe and the other for trench excavation and pipe-laying, in addition to performing other work and furnishing some materials.

The half-completed $5,500,000 aqueduct, which will carry water stored in Deer Creek reservoir in Provo Canyon to Salt Lake City, is expected to assure an adequate supply of water in times of drought, and sufficient water to meet the needs of Salt Lake City's growing population. (*ENR* Aug. 7, 1941, vol. p. 185.)

Now in progress is a contract for 10½ mi. of reinforced concrete line, under direction of contractor Carl B. Warren, Spokane, Wash. Work on this section of the aqueduct is scheduled to be finished in January. A 5½-mi. section at the beginning and a 7½-mi. section at the end of the aqueduct will remain to be constructed, according to Mr. Larson.

L. R. Hunkley, of Salt Lake City, is the resident engineer supervising the work on the project.

Missouri, Columbia river authorities opposed by legislators, business men

Organizations attack authorities as encroaching on states' control of own resources and as detriments to business

Vigorous opposition to the formation of river valley authorities for the Missouri and Columbia River Valleys along the lines of the Tennessee Valley Authority was made public by official bodies last week.

In the Missouri Valley instance, opposition was expressed by a committee appointed by the Missouri State Legislature, and by the Mississippi Valley Flood Control Association, whose president is also chairman of the U. S. Senate Flood Control Committee.

In Missouri, the legislature-appointed Ricketts Commission issued a supplemental report flatly rejecting the establishment of an MVA and sharply criticizing the TVA.

As submitted, the report was drafted by L. T. Berthe of Charleston, Mo., an engineer; and signed by Senator Edward V. Long, Representative Marvin M. Wright and Earl S. Cook. Other members of the committee are F. V. Heinkel, of Columbia, president of the Missouri Farmers Association, and state Senator Claude V. Ricketts, of St. Louis, chairman.

"The Missouri basin," the report said, "does not adapt itself to regional control by a river authority. The supplanting of the present agencies by a newly created authority at this time would be a serious mistake."

The four members of the commission recommended that an existing interagency committee, consisting of representatives of four federal bureaus and the governors of Missouri, Nebraska, Montana and Wyoming be given statutory standing by Congress. They commented that the problems arising from individual and state water rights of paramount importance in the upper reaches of the river can best be solved by existing agencies which have had many years of experience in the field.

Quoting Dr. Arthur E. Morgan, former chairman of the TVA, as saying that an MVA would be a powerful instrument for bringing in a new social order, the commission's report said:

"The question arises if that is the real purpose of the MVA's proponents. Would they be equally interested in a regional authority divested of powers not germane or essential to regional control of water resources? The general radical characteristics of those elements most vociferous in its support whom we encountered during our inspection in the basin area impels one to believe otherwise." The group added that legislation pending in the U. S. Senate for creation of an MVA is more liberal in the granting of widespread powers than was TVA legislation.

Mississippi group opposes

Senator John M. Overton, president of the Mississippi Valley association and chairman of the Senate Flood Control Committee, said at New Orleans, La., that the association will send to Congress a memorandum voicing "vigorous" opposition to the MVA plan, and requesting that Congress appropriate funds for the vast river projects already approved but on which work had been deferred until war's end.

The group held its annual meeting at New Orleans starting Dec. 10 to hear talks by Army Engineers including Lt. Gen. Raymond A. Wheeler, Chief of Engineers and others.

"If the Mississippi and Missouri Valleys are to develop, work on the authorized projects should begin as soon as possible," Senator Overton said. "Although the $200,000,000 overall development was originally planned as a 15-year undertaking, the association feels that the appropriations should be made during a much shorter period.

Protest Columbia Authority

Strong opposition to establishment of a proposed Columbia River Valley Authority, on the ground that it would constitute a "menace to state rights, self-government and the principle of home rule" was voiced by the Oregon Reclamation Congress at its annual meeting at Portland.

In two resolutions passed by the group, the congress expressed opposition "to the policy of the federal government taking and keeping control over the consumptive uses of water in the West", and opposed "that philosophy of government that would supersede and replace control of the people of the affected states of their basic natural resources by an untried, remote-control federal system."

In a parallel opposition move, the Columbia Basin Fisheries Development Association asked Oregon Senators to oppose construction of more dams on the Columbia River.

Make topographic survey for Tiber Dam, Mont.

Topographic surveys for the Tiber Dam in Montana are now in progress on the lower Marias project, one of the initial units of the Bureau of Reclamation's Missouri River basin developmental plan authorized in the Flood Control Act of 1944, according to H. D. Comstock, regional director. Contour maps of the first 13½ mi. of the main Tiber canal have been completed by Fairchild Aerial Surveys, Inc., of Los Angeles.

By use of the photogrammetric method aerial photographs of the first 13½ miles of the main Tiber canal have been used to produce contour maps. These maps will now be used in plotting the course of the canal which for that distance must follow a shale escarpment, necessitating a number of deep cuts and several tunnels.

The proposed dam, to be constructed 13 miles south of the Tiber siding on the main line of the Great Northern railway, will create a storage reservoir of 915,000 ac. ft. Present plans envision a large earth fill structure rising 185 ft. above the stream bed and 2,880 ft. long. The Tiber reservoir will extend upstream 25 mi. and will average 1¼ mi. in width.

Engineers report on Westchester Co. drainage

A 500-page report on drainage conditions along six Westchester County, N. Y., streams was recently filed with the county Board of Supervisors.

The streams studied have drainage areas of from 4.8 to 35.7 sq. mi., totaling 109 sq. mi. These areas are highly developed, with a population of 296,000 and an assessed valuation of $897,000,000. Considerable damage to residential and commercial property is caused by flash floods generally resulting from summer thunder showers or hurricane-type storms of short duration.

The report recommends expenditures of $7,500,000 for construction of various types of flood control works, including detention reservoirs, channel improvements, dykes, pumping stations and diversion tunnels. County regulations of new construction of bridges, retaining walls, buildings, etc., in flood plains and special zoning for such areas are also advocated.

The investigation was made by the Westchester County Department of Public Works under supervision of James C. Harding, Commissioner, and John W. Raymond, Jr., of Boston principal hydraulic engineer, and Charles E. Ryder of Harrisburg.

Urge Mahoning Valley communities to build sewage disposal plants

Engineers tell river towns they must end pollution quickly to get full benefit of proposed $8 million reservoir

Communities along the Mahoning River between Warren, Ohio, and the Pennsylvania line must eliminate pollution in the river before they can realize benefits of a proposed $8 million reservoir to be built near Youngstown, officials warned last week.

Army engineers are now proceeding with engineering plans for the new reservoir, which would be built on Eagle Creek, above Warren, as a flood control measure and to provide storage for industrial water.

In warning the Mahoning Valley communities, federal and state engineers who have just completed a survey of the valley's water resources, characterized the river as "probably the worst polluted stream in America."

Fred H. Waring, Chief Engineer of the Ohio State Department of Health, reported that a pollution load equivalent to that of 430,000 persons is dumped into the Mahoning in the 25-mi. stretch between Warren and the state line. Industrial waste, equivalent to that of 140,000 persons, is included in Mr. Waring's estimate. He added that he had served notice on eight communities —including Youngstown, Warren, Niles and Struthers—to begin preparing disposal plant plans.

Maj. Maurice LeBosquet Jr., senior engineer for the U. S. Public Health Service, said the communities involved would "have to consider sewage treatment works" before the Public Health Service could credit sanitation benefits to the new reservoir.

Surveys under way

Meanwhile, Kenneth M. Lloyd, secretary of the Mahoning Valley Industrial Council, revealed that three different surveys of the valley's resources are now under way. These include surveys and reports on the Eagle Creek Reservoir; a study of sewage disposal by engineers for the City of Youngstown, and a study of economic factors being made by the state water supply board under charge of C. F. Youngquist, chief engineer.

According to Col. W. E. Lorence, Pittsburgh district engineer for the Army, plans for the new reservoir will be ready by next July, but pollution must be eliminated before full benefits can be realized.

The reservoir would form the area's second largest lake, with a capacity of about 40 million gals. The lake would be created by an earth-fill dam, and would control the runoff of a 95 sq. mi. drainage area. Col. Lorence said that storage of 6 in. of the annual 26½ in. runoff are required for flood control, while the remaining capacity could be reserved to insure stream flow during summer months.

Berlin Reservoir, built during the war period, would become part of the flood control system, its storage also being used to maintain flow in the stream.

Two new soil conservation districts are already organized and legal procedure for formation of a third in Wyoming were approved recently by the state committee on soil conservation.

New districts are the Laramie River Project and the Saratoga-Encampment District, each of about 400,000 acres.

Better dead-end barriers sought by Milwaukee

Flimsy dead end street barricades are being checked by city officials of Milwaukee, Wis., as the result of fatalities caused when automobiles crashed through them. Walter M. Swietlik, Commissioner of Public Works, said his department is at work on new barricades for rivers, railroad cuts and hillsides throughout the city.

Steel streetcar rails will be sunk into the ground, with heavy timber crosspieces to form the barrier, Mr. Swietlik said. The safety commission will place a reflector danger sign on the barricade and other warning signs at approaches to it.

A second type of barricade will have streetcar rails for uprights with heavy cable strung betwen the uprights. The latter type is considered more satisfactory because it will stop almost any kind of vehicle with a minimum of damage. Timber crosspieces painted in alternate black and white stripes to provide additional visibility, to be set up at some distance from the barrier to warn motorists they are approaching a road block are also being considered.

State pushes court fight on Los Angeles sewer

Trial of the suit filed against Los Angeles, its mayor and 88 other officials of that city and other municipalities and districts in the Los Angeles area, by the state, to enjoin use of the city's Hyperion outfall sewer, is in progress.

Filed Dec. 13, 1943, (*ENR* Aug. 9, 1945, vol. p. 147) the suit charges that sewage discharged into the ocean by the Hyperion sewer has polluted Santa Monica and other beaches, forcing the state to close them.

Deputy Attorney General Bayard Rhone, representing the state, on Dec 4 waived the state's claim for $1000 a day penalties, made against 10 of the defendant cities, in order, he said, to facilitate correction of the conditions. The state is pressing for a verdict in its favor, and a court order that would force action by the defendants on long-delayed plans for construction of a high degree treatment plant.

Early phases of the trial were devoted to establishing the state's case that pollution sufficient to endanger health and cause property damage is caused by the Hyperion discharge. Later testimony will cover such matters as reasonable time allowances for corrective measures, concluding, state's attorneys said, with a demand that the court set deadlines for completion of the corrective program.

Name C. M. Noble N. J. roads engineer

Comdr. Charles M. Noble, CEC, USNR, of Leonia, N. J., has been appointed to the $15,000-a-year post of New Jersey State Highway Engineer, according to an announcement released last week.

Highway Commissioner Spencer Miller, Jr. said that the appointment would be effective about Feb. 1. Comdr. Noble will take the post that has been filled during the past few years by C. F. Bedwell, construction engineer for the department, who has been acting highway engineer.

In announcing the appointment, Mr. Miller said that Comdr. Noble, 49, had served in the Navy during the first World War, and during the past conflict was with Seabee units in Alaska and China. Characterizing the new appointee as "one of the foremost authorities on design of parkways and freeways", Mr. Miller said Comdr. Noble did engineering work from 1919 to 1923 on harbors and highways in southern states; served later with the Port of New York Authority on general and highway features of the George Washington Bridge and other structures; was a special engineer for the Pennsylvania Highway Commission during its work on the Pennsylvania Turnpike; and has served as Camden County resident engineer for the New Jersey department.

FROM AN EDITOR'S NOTEBOOK

Resignation of Sanitation Commissioner William F. Carey deprives New York City of the services of an unusual administrator.

One of the ablest and least publicized public works administrators in the country is resigning from his post in New York City on Dec. 31, for what he describes as an "attempt to take a rest". But those who know William F. Carey, commissioner of the city's Department of Sanitation for the last decade, believe that the only reason he even acknowledges the idea of a rest is because he has not yet fully recuperated from a recent serious operation.

His resignation as commissioner does not affect his status as superintendent of landfills, however—a civil service appointment that he earned two years ago when he placed first in competitive examinations. He was granted leave of absence from that job to continue as sanitation commissioner. His eligibility for the superintendent's post continues for another year.

A labor of love

Many people have wondered why Mr. Carey originally accepted the appointment as sanitation commissioner in 1936. To a man of his standing and accomplishments, the post certainly could hold no attractions from the viewpoint of salary, prestige or political influence.

Long before this time, he had become an eminently successful contractor engaged in railroad and heavy construction both in this country and abroad, and he had a distinguished record as a manager of such widely diversified enterprises as electric and waterworks utilities, cement mills, phosphate and coal mining properties, as well as the Madison Square Garden in New York City. In addition, he holds directorships in several banks and manufacturing companies.

Then why did he take a position in city public works administration?

"The reason I accepted the post of sanitation commissioner," relates Mr. Carey, "was first to satisfy a long-deferred ambition to take part in some form of public service. Secondly, I had spent a good deal of my time and efforts in the past figuring out the cheapest ways of moving dirt from one place to another—handling the refuse from a city of 7,000,000 people and organizing snow removal activities in New York City offered problems that I just couldn't resist tackling."

How well Commissioner Carey "tackled" these problems is now a matter of record, and the record is one that commands the greatest admiration. One of his earliest accomplishments was completely to mechanize refuse collection, street cleaning and snow removal operations. This change led to the design of an enclosed body, mechanical loading type of collection truck that has since become a model for other large cities.

William F. Carey

Perhaps the most important contribution, from the standpoint of municipal economy, was Mr. Carey's introduction of the landfiill system of refuse disposal. In this operation he drew upon his earth-moving experience to employ heavy construction equipment, such as bulldozers and draglines, for effective handling of large volumes of refuse at low cost.

At first the landfills met with public opposition, and Mr. Carey was indicted by a grand jury for allegedly conducting a menace to health. However, the indictment was discharged following an investigation by a board of national health and sanitation authorities who reported to the court that the landfill operations not only were without hazards to health, but on the contrary the fills actually diminished potential public health hazards obtaining previously at the sites.

In retrospect it is of interest to note that the landfill system, which has saved New York City as much as $2 million a year in disposal costs, eventually was widely used in Army camps and has been adopted by other cities in the United States and South America.

A thoughtful boss

Mr. Carey has always shunned publicity, and deeds rather than words mark his accomplishments. No one knows this better than the 15,000 workers in the Department of Sanitation. They refer to him as a "square-shooter," are fully aware that he will accept nothing less than an honest day's work, and proclaim that he is the greatest friend they have ever had.

In support of this they cite his abolishment of the "Confidential Squad" (a spy organization within the department) the second day he took office and found out such a group existed; they also point to the establishment of special facilities at a Manhattan bank where they can get personal loans at 3½ percent and thus avoid entanglement with the "loan shark" racket; and finally they tell about Sanita, a large reservation in Dutchess County sponsored by Commissioner Carey to provide a vacation spot where department employees and their families can enjoy recreational opportunities at low cost.

Hates to quit

In a recent interview, Commissioner Carey said, "I hate to quit this job: it has given me more satisfaction than many things in which I have had a hand. But the doctor says I need a rest and I'm going to try my hand at fishing near Lakeland, Fla. I don't want to fish half so much, however, as I would like to get on with the job of supervising landfill operations."

Bill Carey means it, too. This farm boy from Hoosac Falls, N. Y., who went to Montana at the age of 15 to "straw-boss" on construction of the Great Northern Railway, and continued to work hard enough to become the head of big-time contracting and management enterprises, has never found any satisfaction in idleness. And his ten years of distinguished service to New York City have provided him with the richest of satisfactions.—*E.J.C.*

World's largest pumps for Coulee irrigation

The largest pumps in the world will be installed at Grand Coulee Dam to provide water for the first 400,000 of 600,000 acres to be irrigated in the Columbia Basin Project in south-central Washington, the Bureau of Reclamation announced recently in calling for bids on the equipment.

Each of these powerful pumps will be capable of serving 100,000 acres. The bid call was for either four or six pumps, the choice to be made by the bidder in submitting offers. Powerful enough to lift 100,000 pounds of water a second to a height of 270 ft., each pump will be driven by the world's strongest electric motors, rated at 65,000 horsepower. Each pair of electric motors will be served by one of the 108,000 kw. generators at the dam, also the world's mightiest.

The pumps will force water from Lake Roosevelt, the reservoir formed by Grand Coulee Dam, up over a hill and into the nearby Grand Coulee itself where a 27-mi. lake will be formed by two new dams. From this lake in the Grand Coulee, the water will flow by canals to bring life to an expanse of sagebrush land now largely uninhabited. Ultimately this agricultural development, listed as the No. 1 project in Reclamation's postwar schedule, will support 17,000 farm families.

On the basis of 1940 prices, the entire pumping plant, with 12 units installed is estimated to cost approximately $31,000,000.

Chicago starts planning a second filter plant

Preliminary groundwork was laid Dec. 13, for additional treatment of Chicago's water supply when the city council finance committee approved a million-dollar appropriation in its 1946 budget for a second filtration plant to be built on the near northside of the city.

Based on the number of people to be served, the capacity of the new plant will be about 50 percent larger than the one recently placed in operation at 79th St. and Lake Michigan (*ENR*, Sept. 27, vol. p. 403). Initial plans call for the proposed plant to have 120 filter basins with a total nominal capacity of 480 mgd.

Some 1,280,000 persons living in the central and near northside of Chicago will be supplied by the new plant, as well as about 230,000 people in the urban area adjacent to the west side of the city. Roughly, the area to be served by the plant extends from Pershing Road on the south to Fullerton Ave. on the north, and from Lake Michigan to the west city limits. Cicero, Berwyn and Oak Park, Ill., also will receive filtered water from the new plant.

Construction of the plant is expected to take about five years. Plans will be prepared by the city's engineering forces under John R. Baylis, engineer of water purification and Fred G. Gordon, assistant city engineer, reporting to W. W. DeBerard, city engineer.

Engineers' union joins office worker group

The Federation of Architects, Engineers, Chemists and Technicians, CIO union of technical employees, last week voted to amalgamate with the United Office and Professional Workers of America, another CIO affiliate.

The action was taken at the FAECT's eighth annual convention in New York City. The convention action must be ratified by a membership referendum. Union officials said that the FAECT would henceforth be known as the Technical and Scientific Division of the Office and Professional Workers' group.

A statement released by FAECT headquarters said the action was taken to "create within the CIO a more effective medium for extending organization among the nation's technical, professional and salaried employees."

Complete building of Arizona irrigation dam

Horseshoe Dam, sixth of the structures built to retain water for the Salt River Valley in Arizona, and second across the Verde River, is now complete, according to the Salt River Valley Water Users Association.

The dam will create a reservoir holding 60,000 acre-ft. of water, and is designed so that a superstructure may be added at a later date to create an eventual storage capacity of nearly 200,000 acre-ft.

Built over a period of 18 months by the L. E. Dixon Co. and the Arundel Corp., the structure cost between $1,500,000 and $2,000,000. Construction was financed by the Defense Plant Corporation, since a part of the stored water is to be used by the Phelps Dodge Copper Corp. for an ore extracting plant.

Plumbers and steamfitters of Rock Island County, Ill. have been granted a pay increase of 12½ cents an hour, it was announced recently.

Seek comment on steel recommendation

A voluntary Simplified Practice Recommendation for Hot-Rolled Carbon-Steel Bars and Bar-Size Shapes, proposed by the Technical Committee on Carbon Steel Bars of the American Iron and Steel Institute, has been submitted to all interests, according to the National Bureau of Standards.

The proposal covers the nominal sizes of rounds, squares, round-corner squares, hexagons, half-rounds, ovals, half ovals, bar-sizes of angles, channels and tees.

The purpose of the program is to direct attention of all concerned to those nominal sizes of bars and bar-size shapes that currently are in general use and demand, and to make possible reductions in inventories and increase production through less frequent roll changes in the mills.

T. T. McCrosky to direct Boston planning group

Commander Theodore T. McCrosky, USNR, has been appointed executive director of the Greater Boston Development Committee.

Former director of the New York Planning Commission and executive director of the Chicago Plan Commission, he has served as planning engineer for the Chinese Government and the Regional Plan of New York, is the author of many technical reports and articles, and served as vice-president of the American Institute of Planners for 1945. Holding degrees from Yale and the University of Louvain, Comdr. McCrosky recently was in charge of field liaison with naval advanced bases, and was attached to the Office of Chief of Naval Operations, base naval maintenance division.

Lift wartime controls on Canada construction

Removal of all wartime construction controls in Canada was announced in Ottawa this month by Munitions Minister C. D. Howe.

However, the shortage of building materials is still critical so that only projects which are urgently required are to be undertaken at this time, Mr. Howe cautioned.

He added that although construction permits will not now be required from the federal government, building licenses will still be required from civic and municipal authorities in practically all parts of Canada.

Charge NHA cuts out many engineering jobs

N.S.P.E. at Cleveland meeting asks abolition of agency to save money and stop duplication of work

Charging that the National Housing Agency, while financing "social service functions" in public housing projects had eliminated about 15,000 engineering jobs and reduced the number of inspectors to "inadequate" proportions, the National Society of Professional Engineers last week passed a resolution calling for abolition of NHA.

The resolution was a high point of a 3-day meeting of the group at Cleveland, Ohio. At the meeting, Ritchie Lawrie, Jr., Harrisburg, Pa., civil engineer and president of the Pennsylvania State Housing Commission, was elected president.

Ritchie Lawrie, Jr.

The resolution asking an end of the National Housing Agency was sent to U. S. Senator Robert A. Taft of Ohio. The resolution said, in part:

"Discontinuance of the National Housing Agency would eliminate duplication of work and save expense. It is proposed that the FPHA be incorporated into the Federal Works Administration, and that the welfare and social work now performed by the local housing authorities and the FPHA be eliminated and left to the overall community, state and federal welfare agencies in order to reduce the annual contribution made by the federal government."

Commenting on the resolution during previous discussion, members said that under normal conditions the public interest is protected by assignment of an adequate number of inspectors—all of whom are engineers. To bring the increased cost of construction back to the legal maximum, the U. S. Housing Authority has reduced the number of inspectors to a force inadequate to protect the public interest, the group charged.

Speakers at the meeting included Blake R. Van Leer, president of the Georgia School of Technology, and formerly chief of the Facilities Branch, Army Specialized Training Division, who told the group that the United States is faced with an estimated shortage of 40,000 engineers.

Mr. Van Leer attributed the shortage to the fact that the United States, unlike its allies and enemies, did not defer technical students in the draft.

Begin grading operations on 18-mile Baltimore-Washington, D.C., parkway

PRA lets four contracts for work on limited-access road designed to cut travel time between the two capital cities.

Grading for sections of the southern 18 miles of a limited-access parkway from Washington to Baltimore has been started by the Public Roads Administration. Four contracts totalling $1,194,000 have already been awarded for the grading and small drainage structures for 6 miles of the work. Other sections will be started as funds for the work become available.

The PRA is building the southern section, between the District of Columbia boundary and Jessup Road, because this portion of the expressway has been located on federal property. The lands crossed includes those of Fort Meade, the Greenbelt housing development, the Beltsville research area, and the District of Columbia Children's Home. This choice of location has made possible a wide right-of-way and it will permit good landscaping. No crossings at grade will be permitted in the 18-mi. section.

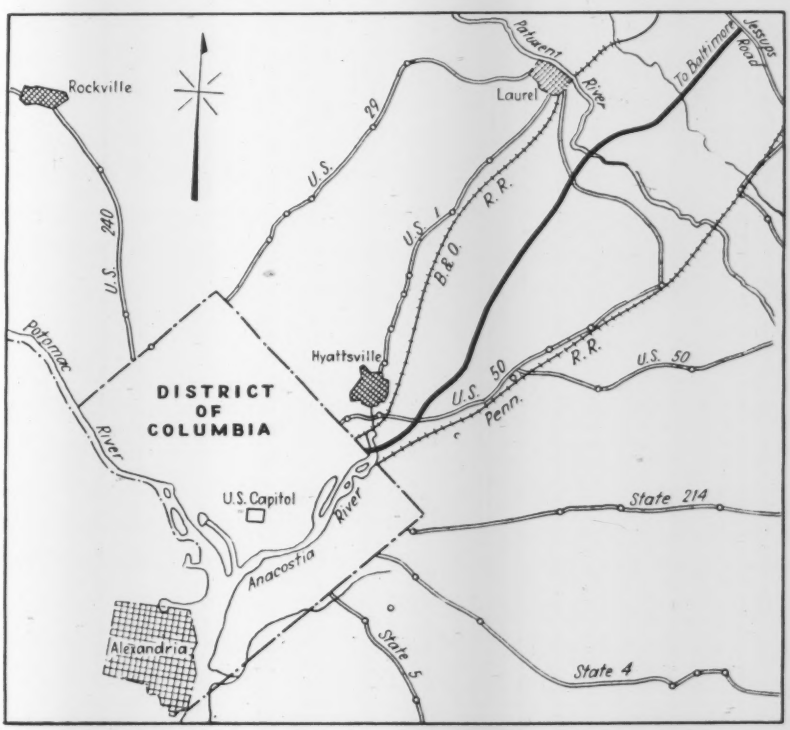
Two lanes each way will be constructed, and plans provide for addition of another lane each way later, if needed. The type of pavement to be constructed has not yet been specified.

No decision has been reached as to the final location of the route within Washington. Much construction will be needed to permit a satisfactory connection at this end of the parkway.

Neither has a definite route been decided upon by the Maryland State Roads Commission to extend the parkway on to Baltimore. However, this work is going ahead and a decision is expected soon. The city of Baltimore is also making studies regarding the best connections at that end and how to extend the expressway through that city.

The four contractors already at work on the project are: R. B. Jaggard Engineering Co., Westmont, N. J.; Kendrickson Bros., Inc., Valley Stream, Long Island, N. Y.; Virginia Paving Co., Arlington, Va.; and Dutcher Corp., Queenstown, Md.

The work is being done by the office in charge of road construction in eastern national parks and forest of the Public Roads. For this office H. J. Spelman is division engineer.



For the first 18 mi. northeastward from the District of Columbia line to Jessup Road, (upper right) the parkway traverses federally-controlled land.

MEN AND JOBS

Neal D. Smith, former city engineer of Ontario, Calif., has been appointed city engineer of San Diego, succeeding **Hans W. Jorgenson,** retired. Mr. Smith, who is a graduate of the California Institute of Technology with degrees in engineering and physics, began his engineering career with the Los Angeles Department of Water and Power in the Colorado River survey division, which become the nucleus of the Metropolitan Water District. For several years he worked under **J. L. Burkholder,** who is now manager-engineer of the San Diego County Water Authority.

Neal D. Smith

Three highway engineers from Nicaragua and Costa Rica have arrived in the United States as guests of the Transportation Department of the Office of Inter-American Affairs, the Public Roads Administration and the American Road Builders' Association. They will visit plants of the principal makers of road building machinery and study highway construction methods. They are: **Alfonso Peralto,** director general of public works of Costa Rica; **Julio Padilla,** director general of public works of Nicaragua; and **Mariano de Montis,** highway engineer attached to the Public Roads Administration in Nicaragua.

Roy B. Williams recently arrived at Coulee Dam to assume his new duties as assistant supervising engineer for the Columbia Basin Project. A 33-year veteran in irrigation development programs, Mr. Williams is a graduate of Montana State College. His new post at Grand Coulee is an assignment which, for Mr. Williams, will be the latest in a series of responsible engineering positions which began in 1912, when he joined the Bureau of Reclamation.

R. B. Williams

For the last six years Williams has been in charge of the construction of the Friant Dam and the building of the Friant-Kern and Madera canals of the Central Valley Project, California. Other major works of irrigation upon which he has served as a key man include Imperial Dam and All-American Canal of the Boulder Dam project.

Consulting engineering offices have been opened in San Jose and Los Gatos, Calif., by Coburn and Montague. **Charles L. Coburn** is a graduate of M.I.T., and has just resigned as chief engineer, Navy Design Division, Naval Ordnance Plant, Shumaker, Ark., **Everett N. Montague** is a Northeastern University graduate and for several years has been engaged as an industrial engineer with Joshua Hendy Iron Works, Sunnyvale, Calif.

Seymour Justema, former city manager, Grand Haven, Mich., has been appointed city superintendent of Charlotte. He was resident engineer of the Michigan State Highway Department from 1921 to 1924. Until 1932 he was county engineer and superintendent of the Menominee County commission.

W. H. Cushman, civil engineer of Marion, Ark., and former engineer for the Arkansas Highway Department, has been employed by West Memphis, Ark., as city engineer. He will supervise repairing of streets torn up in the installation of new city sewer lines, and the hard surfacing on 10 principal streets.

John Pomeroy, for seven years public health engineer in the Van Buren County, Mich. health department, has been appointed sanitary inspector for Kalamazoo.

Father and son will be associated in an engineering office opened at Bellingham, Wash., by **E. G. Putnam,** who will specialize in the planning of industrial and food plants while his father.

Back to Civilian Activity

Donald H. Collings, who served with the Seabees in the South Pacific, and former city engineer, of Lewiston, Me. He is now engineer in charge of suburban development at Wilmington, N. C.

Lt. Comdr. Walter W. Brennan, USNR, formerly with Barr & Lane, Inc., contractors, has joined the sales division of the Griffin Well point Corp. at New York.

Capt. Donald E. Henn Army Sanitary Corps, has returned to his former position as manager of the DeKalb, Ill., Sanitary District.

Lt. Col. Harry F. Hansen, Atlanta, Ga., formerly attached to the Fourth Division at Camp Butner, N. C., has returned to his former job in Atlanta as a civil engineer with the Federal Power Commission.

Richard M. Duncan, Kansas City, Mo., has returned from the Navy to his former work with the B-D-R Engineering Corp.

Capt. R. D. Gambrell, Jr., Dallas, Tex., is now a junior chemist in the sewage department of Houston.

Richard F. Lovejoy, recently discharged from the Civil Engineering Corps of the Navy, has been appointed a senior engineer for Alameda, Calif.

Charles G. Hartsfield, vice-president and general manager of the Atlantic Engineering Co., Greensboro, N. C., has rejoined the firm after having served as an engineer with the Army's Fourth Service Command at Atlanta, Ga.

Maj. F. C. Dugan, Sanitary Corps., has resumed his position as chief engineer, Kentucky State Health Department.

Maj. Robert M. Hoover, Kansas City, Mo., has resumed his position as vice-president and treasurer of the Kansas City Bridge Co.

Gene W. Hall, recently brigadier general, A.U.S., has resumed his position as a partner of Parsons, Brinckerhoff, Hogan & Macdonald, New York City.

Lt. Col. Carroll L. Mann, Jr., has opened an architectural and engineering office at Greensboro, N. C., with **Maj. Herman R. McLawhorn** of Wilson, N. C.

Capt. Albert C. White, who was port director for the Army at Oakland, Calif., is now assistant director of public works, assistant city engineer and deputy superintendent of streets of Richmond City, Calif.

Capt. Walter Jollie, after 37 months overseas with the Army Corps of Engineers, returns to the division of sanitary engineering, Illinois Department of Public Health, Springfield.

Lt. Comdr. George P. O'Rourke, president of the George P. O'Rourke Construction Co., Houston, Tex., has returned after serving with the Navy in the Pacific as commander of a Seabee battalion. **Lt. Comdr. Tom C. Crist,** chief engineer of the same company has also returned after serving in the Naval Engineering Corps.

Charles E. Putnam, will specialize in civil engineering. The senior Putnam has been working for Seattle City Light on the design of Ross Dam.

P. K. Troutman, Ashland, Ohio, has been named acting director of Division 3 of the Ohio Highway Department, succeeding the late Howard A. Keller, Bucyrus. Troutman has been engineer for location and design since June, and formerly served with the highway department at Newark.

Lt. Col. H. W. Van Hovenberg, chief of field party for the Institute of Inter-American Affairs in El Salvador, has been awarded a gold medal on behalf of the Ministry of Health of El Salvador. Under Colonel Van Hovenberg's direction, a number of medical and sanitary engineering projects were brought to completion in that country.

After serving as superintendent of the city waterworks plant at Kent, Ohio, for 23 years, **Ollio H. Young** is retiring. Previously he had spent 10 years as chief engineer at the water and light plant in Wabash, Ind.

F. W. Alexander of Winnipeg, Man., assistant chief engineer of Canadian Pacific Railroad, Western Lines, has retired after 41 years of service.

R. E. McGowan, engineer on the Columbia Basin project in Eastern Washington since 1934, has been transferred by the Reclamation Bureau to Boise, Idaho, where he will assume new duties on the regional engineering staff.

George L. Hockensmith, formerly director of the construction bureau for the War Production Board, has become an engineer with the Linde-Griffith Construction Co. of Newark, N. J.

G. L. Hockensmith

Mr. Hockensmith, a graduate in civil engineering from the University of Maryland, was engaged prior to the war in heavy construction throughout the country. Projects with which he was connected include Montgomery Island Locks and Dam at Ohioview, Pa., South Grand Island Bridge, Tonawanda, N. Y., foundations for the Buffalo Sewage Disposal Plant, Buffalo, N. Y., and the D. L. and W. grade crossing elimination at Syracuse, N. Y. His work has generally been in the field of sub-aqueous foundations including excavation, pile driving and cofferdams.

W. W. MACK (left) for the past 17 years chief engineer of the Delaware State Highway Department, discusses a road-widening project with GEORGE HUNT, inspector.

V. K. Boynton, civil engineer, has formed a partnership with **Frank F. Drelshagen,** architect, in the organization of a new firm at Milwaukee, Wis., to be known as Drelshagen-Boynton & Associates.

Alphonse Cote has been named superintendent of public works, Quebec, Que.

In Bond County, Ill., **Ward Reynolds** has become acting superintendent of highways to take the place of **R. O. Young,** former county highway superintendent, Greenville, Ill.

Lieut. Comdr. William W. Wickes, (CEC) USNR, was returned to inactive duty in Jacksonville, Fla. He had directed construction for 28 months at advanced bases in New Calendonia, Australia and on Okinawa. Also he saw service overseas with the First Marine Division, whose commanding general awarded him a commendation for meritorious duty in connection with the battle of Cape Gloucester.

John Morrison, bridge plans engineer for the Montana state highway department since 1942, has resigned to become a private engineering consultant with offices at Helena. The firm will be known as the Morrison Engineering Co.

Amiel Reichsten has been appointed city engineer at Ottumwa, Iowa. He was formerly with the Iowa State Highway Commission and later was city engineer at Fairfield, Iowa. Recently he was an engineer in Panama.

The following changes have been made in the city engineering department of Eau Claire, Wis.: **Neal W. Bartholomew,** assistant city engineer has resigned to become associated with S. P. Hall, Eau Claire consulting civil engineer; **William E. Wolf,** superintendent of the sewage disposal plant in Shawton, has been named assistant street superintendent; and **Riley C. Bates,** assistant street superintendent has been transferred to the sewage plant as superintendent.

George W. Francis and **Ernest D. Middaugh** have formed a partnership and opened a professional consulting engineer's office in Rockford, Ill., known as the Francis Engineering Co. The firm will offer services in all phases of public works improvements. The Francis Engineering Co. which has been in existence since 1926 will continue its office in Saginaw, Mich. Mr. Middaugh who has been with the company since 1938, has recently completed three years of engineering at the Green River ordnance plant where he acted as chief field engineer during construction and assistant chief engineer.

On Nov. 13, **Hubert G. Davis,** acting superintendent of the Waco, Texas, city waterworks since the resignation of George Rohan in April, was appointed permanent superintendent of the Waco city waterworks. Davis has served in the Waco water department since 1930.

John D. Watson and **James E. Hart** as Watson and Hart have opened offices in Greensboro, N. C., as consulting engineers on industrial and municipal improvements. Mr. Watson has been chief engineer for J. A. Jones Construction Co. of Charlotte, and for the last 2½ years has been in charge of design for that firm on construction for atomic bomb production at Clinton Engineer Works. He has specialized in soil mechanics and foundations and has taught civil engineering at Duke and the University of North Carolina.

John D. Watson

Mr. Hart, an electrical engineer, also has been associated with the atomic bomb project, as assistant general superintendent for Comstock-Bryant Electric Co. on electric installations. He formerly was with Day and Zimmerman.

ENGINEERING SCHOOL NEWS

Differential analyzer at California—Dr. T. K. Thompson honored at Toronto—Brouillt, new director of L'Ecole Polytechnic

For the accurate, speedy solution of differential equations requiring as many as fourteen simultaneous integrations—problems so complex that their solution would not be undertaken by ordinary mathematical means—a G-E differential analyzer has been purchased for the recently announced college of engineering on the Los Angeles campus of the University of California.

Sixth of its kind in the United States and patterned after an original design made ten years ago by Dr. Vannevar Bush at Massachusetts Institute of Technology, the machine will be the first installed in the West. Its construction and installation will take 18 months and cost $150,000.

The newest element of the analyzer is a polaroid photoelectric follow-up system used with the integrator which improves performance by shortening solution time and increasing the degree of accuracy.

Purchase of the analyzer is the first of several steps to create at the University of California, at Los Angeles, a modern engineering school that will, in addition to training students in engineering, provide facilities for research contributing to both public welfare and commercial benefits for California, it was announced.

An honored guest at the recent annual school dinner of the University of Toronto was T. Kennard Thomson, 82, of New York City, who 60 years ago, as an undergraduate, founded the Engineering Society of the University of Toronto—the oldest engineering society in Canada. Mr. Thomson was graduated in civil engineering in 1886, from the university's School of Practical Science, after having headed his class for three years. From 1886 to 1888 he was a draftsman and designing engineer with the Dominion Bridge Co., Lachine, Que. In 1888-90 he was assistant engineer for the Pencoyd Bridge Co. Later he was bridge engineer for the Norfolk and Western Railroad, working on 129 new bridges, including its Ohio River Bridge.

Later, for nine years, Mr. Thomson was chief engineer for Arthur McMullen & Co., in general contracting work, and from 1893 on, he operated a consulting office. In 1911-14 he was one of a board of five consulting engineers on the construction of the N. Y. State Barge Canal. He was retained for foundations on a number of New York skyscrapers and did work in connection with N. Y. city subway construction.

Today, hale and hearty at 82, Mr. Thomson is retired, with 50 years of varied experience behind him. In the last 36 years he claims that he has not lost a day's work through illness.

The college of engineering, University of Illinois, has more than doubled its last year's enrollment. The present total is 908 students—16 women, 892 men; that of the preceding year was 449—18 women and 431 men.

The department of civil engineering has among its graduate students five each from Turkey and China, one Hawaiian Chinese, and one each from Venezuela, Argentina and Santo Domingo. Among graduates there are two from Brazil, one from the Virgin Islands, eight from Turkey, one from Mexico, two from Costa Rico, three from Chile, one from Iran and one from the Dominican Republic.

Ignace Brouillet, partner in Brouillet and Carmel, consulting engineers, Montreal, is the new director of L'Ecole Polytechnic de Montreal, succeeding Dean Armand Circé, who has retired.

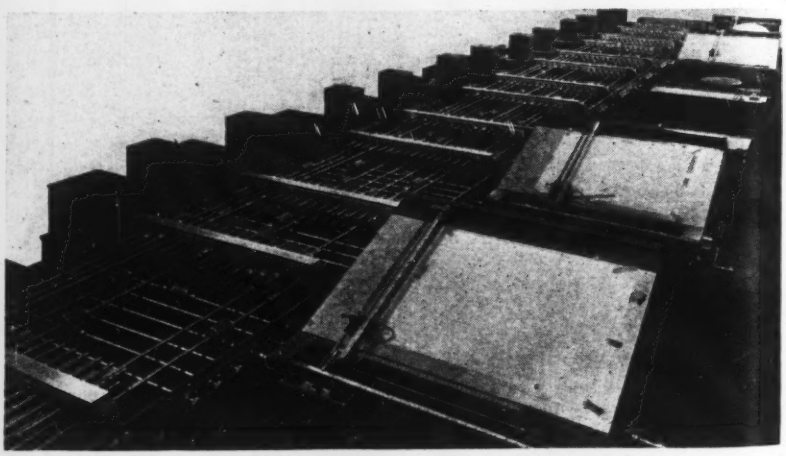
W. C. Van Dyck, superintendent of college graduate training courses of the Caterpillar Tractor Co., Peoria, Ill., was guest speaker recently before the engineering students of Bradley Polytechnic Institute, Peoria, his subject being, "What Industry Expects from the Engineering Graduate". A graduate in engineering of the University of Vermont, Mr. Van Dyck has spent nine years at the Caterpillar plant directing its educational program and in this work has visited most of the engineering schools in the United States.

Col. Lewis Turtle, of Charleston, W. Va., a West Point graduate now retired from the Army, has joined the faculty of the Duke University school of engineering at Durham, N. C., as an instructor of engineering drawing.

Dr. S. S. Steinberg, dean of the college of engineering, University of Maryland, has been appointed chairman of the Maryland Committee on Water Pollution—the new name for the state pollution committee. He succeeds John W. Sherwood.

Realizing the need of engineering research and testing facilities for such Georgia projects as the extension of the Chattahoochee River waterway to Atlanta, ports development, sewerage systems for cities and towns, oil and gas pipe lines, and irrigation, the civil engineering department of the Georgia School of Technology is expanding its hydraulic division, it has been announced by Cherry L. Emerson, Dean of Engineering. The Georgia Tech Alumni Foundation has made a grant of $10,000 to equip the division with a modern fluid-flow laboratory.

Prof. Thomas H. Evans, head of the civil engineering department, says that the work will be under the supervision of Carl E. Kindsvater, who will join the faculty after the completion of his present work with the U. S. Engineer Department, Little Rock, Ark. Mr. Kindsvater is a graduate of Kansas State College and the University of Iowa, and is well known in hydraulic engineering.



The G.E. differential analyzer after which is patterned the machine being built for the University of California—the sixth in the United States.

Mexican federal building program will top $46 million in coming year

Government officials announce plans for major irrigation, roads, civic improvement programs—Private construction large

Highways, irrigation works, port facilities and other public works to cost more than $46,000,000 will be built by the Mexican federal government and states during 1946, according to announcements by government officials last week.

Major item in a 1946 federal-government program announced by President Manuel Avila Camacho will be a $19,000,000 irrigation program to be spread over 15 states. Marte R. Gomez, president of the National Irrigation Commission, said that the bulk of the money will be spent for completion of projects now under construction, and for proposed work along the Colorado and Lower Rio Grande rivers. Smaller works will be built in the states of Chiapas, Chihuahua, Guanajuato, Guerrero, Jalisco, Mexico, Michoacan, Nuevo Leon, Morelos, Oaxaca, Queretaro, San Luis Potosi, Sonora, Tabasco and Tamaulipas.

In Mexico City, D. F., and its suburbs, the federal government plans to spend $10,000,000 for roads, bridges, improvements to the city's water system, parks, sewage disposal facilities, and schools. Additionally, the government will spend $5,000,000 on construction of a "University City" within the capital, to house the 14 schools of the National University now scattered through the city.

Another federal program will be expenditure of $2,000,000 on federal highways in Mexico, Queretaro, San Luis Potosi and Coahuila states.

State projects advanced

State projects reported include: Sinaloa State—$5,250,000 for an irrigation dam, port improvements at the city of Mazatlan, and a sugar mill; Chihuahua State—$1,500,000 for public works, including water supply and sewerage and roads; Sinaloa State—$2,000,000 for the same purpose and Coahuila—$1,300,000 military school, at Torreon.

Private construction work will include construction of two resort hotels, to cost a total of $2,000,000, at Acapulco, Guerrero State, by a group of Mexico City business men headed by Luis Montes de Oca.

The Mexican government announced that all but 189 miles of Mexico's 1,422-mi. section of the Inter-American Highway will be completed before the end of 1946. The second section of the road, stretching between the capital and Suchiate, on the Guatemalan border, is now under construction, and will be four-fifths completed by the end of the coming year. First section, a 741-mi. stretch from Laredo, Texas, to Mexico City, was completed in 1936.

The Ministry of National Economy reported that its recent action to increase imports of cement had been successful and had eased a shortage that threatened to hold up construction work. The ministry several weeks ago announced that cement could be imported into the country free of charge. Officials said that shipments had increased from 154 carloads in September to about 600 carloads in November.

Ontario road department to get weather warnings

Special advance weather reports, similar to those supplied for wartime aviation needs, are to be furnished to the Ontario Department of Highways by the Canadian Meteorological Service in order to improve the winter operation of highways.

Reports will be provided to the Department by the Dominion Meteorological Office at Toronto daily at 6 a.m. and 5 p.m. Additionally, forecasts for the weather during the next three days will be transmitted to the 19 division offices of the highway department.

It is believed that this new service will enable road maintenance crews to plan their work, and especially their snow clearing operations, more efficiently. With advance notice of the progress of winter snowstorms, highway snow removal equipment can be placed at strategic points well in advance of the actual snowfall.

JOBS OF THE WEEK

APARTMENT BUILDINGS, Atlanta, Ga.

Tri State Construction Co., Atlanta, Ga., will construct with its own forces six 6-story apartments to cost about $2,000,000.

PIERS, San Diego, Calif.

Bureau of Yards & Docks, Navy Department, Washington, D. C., received the lowest bid for piers, from M. H. Golden Construction Co., San Diego, Calif. at $1,810,825.

CONCRETE LINING, Coachella Canal, California

Bureau of Reclamation, Denver, Colo., received the lowest bid for concrete lining Coachella Canal. All American Canal, from Morrison Knudsen and J. F. Shea, Co., Los Angeles, Calif., at $1,228,841.

GLASS PRODUCTS FACTORY, Pomona, Calif.

Hazel-Atlas Glass Co., Wheeling, W. Va., will construct a glass products plant, on a 30-acre site, with its own forces. The estimated cost is $1,250,000. Laurence Meharg, care of owner, is the engineer.

PLANT ADDITIONS, Three Rivers, Que.

Consolidated Paper Co., Ltd., Three Rivers, will construct with its own forces, plant addition, to cost about $1,250,000.

TUNNEL SHAFT, New York

Wagner Co., New York, N. Y., was the lowest bidder at $2,994,003 for constructing Governors Island Shaft of Brooklyn-Battery Tunnel, when the New York City Tunnel Authority, New York, N. Y., opened bids.

APARTMENT HOTEL, Houston, Texas

Stone & Webster Engineering Co., New York, N.Y., has been awarded a contract for an apartment hotel, swimming pool, community and residential center by Glenn H. McCarthy, Inc., Houston, at about $11,000,000. Hedrick & Lindsley, Houston, are the engineers and architects.

ROADS, California

State Division of Highways Los Angeles, Calif., received the lowest bid for 1.6 miles Santa Ana Parkway, Los Angeles County, from Peter Kiewit Sons Co., Los Angeles, at $1,333,066. G. T. McCoy, Los Angeles is the engineer.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 18.

WASHINGTON HIGHLIGHTS

• ***Heavy road work set***—The state highway departments have reported to the Public Roads Administration that as of October 31, they had plans completed for $647,639,000 of highway construction. They also stated they had plans underway for an additional $2.5 billion of work. The total program contemplated by the departments in various stages of planning amounts to $4.5 billion, the Public Roads Administration survey shows.

• ***Approve Montana bridge***—Consent of Congress for the counties of Valley and McCone of Montana to construct and operate a highway bridge across the Missouri River is reenacted in a bill (H. R. 4808) introduced in the House Nov. 27. The plan is to construct a crossing near Frazer, Mont. The bill reenacts an act approved Aug. 5, 1939.

• ***Deny steel price rise***—Price Administrator Chester Bowles has announced that OPA finds no cause at this time for a general increase in steel prices, but promised a review of the situation when next steel company financial returns are submitted after Jan. 1, 1946.

OPA cannot properly adjust prices on the basis of profits experienced immediately following V-J day, Bowles said. This period was short, confused and abnormal, since the industry's entire operations were upset by heavy cancellations of war contracts.

• ***Housing applications***—Applications for nearly 500,000 units of public housing requested as a three-year program have already been filed with the Federal Public Housing Authority by urban and rural communities that have active housing authorities, FPHA Commissioner Philip M. Klutznick told the Senate Banking Committee last week.

Applications consist of 355,599 units requested by 335 urban localities and 141,473 units requested by 282 rural areas.

Mr. Klutznick appeared in behalf of the Wagner-Ellender-Taft Housing Bill (S. 1592) on which the committee is holding hearings. The bill would increase authorization for annual Federal contributions to communities by $22,000,000 a year in each of the first four years after its passage, to permit additional public housing at an estimated rate of 125,000 units per year in urban areas.

• ***New office***—A bill authorizing the construction of a new federal office building to be built in Nashville, Tenn., not to exceed a cost of $5,575,000 was introduced in the Senate last week. Also introduced was a bill (S. 1660) reenacting an act creating the City of Clinton Bridge Commission and authorizing the commission to construct and operate bridges across the Mississippi River between Clinton, Iowa, and Fulton, Ill.

• ***Price tags for surplus***—Changes in the method of disposing of new and used surplus trucks, automobiles and other motor vehicles have been announced by the Office of Surplus Property, Consumer Goods Division. Previously, these vehicles were sold by the "spot sale" method, the surplus being offered to the highest bidder once or twice a month.

Under the new program, all new or used motor vehicles will be sold at fixed prices.

• ***New Quarters***—Associated Equipment Distributors, whose headquarters for the past five years have been in the National Press Building, has moved to more spacious offices at 1928 I Street, N.W. The move was necessitated by increasing demands on the office by its members.

Flood control work at Massillon, Ohio

Hopes for early resumption of the war-interrupted $5,400,000 flood control program at Massillon, Ohio, designed to control floodings of the Tuscarawas River and to eliminate death trap railroad crossings, were revived when the House deficiency bill was passed in Washington recently. The bill included a $500,000 allocation for this job, which is already about one-third completed. Other cost sharing agencies are the city, county, state and railroads in the area.

C. O. Finefrock, president of the Massillon Conservancy District, which was created to handle the project, said he hoped construction would be resumed before next summer. The work yet to be done includes finishing the straightening of the river channel; construction of a railroad bridge; and building of viaducts spanning the river and railroad tracks at main thoroughfares. Finefrock said plans are now being completed by the State Highway Department and the federal Bureau of Roads for construction of the Lincoln Way viaduct. The state and federal governments will share in this project. A railroad bridge for the Baltimore & Ohio and Wheeling & Lake Erie railroads and the concrete abutment for a second bridge for the Pennsylvania Railroad already are completed.

Arkansas roads' growth overtaxes maintenance

Facing an increase of more than 3,000 miles of road in its state highway system during the past 12 years, the Arkansas State Highway Commission said last week that its maintenance problem was "almost insuperable."

W. Harold Sadler, highway commission chairman, said that since 1923, when an original highway system act was passed, 3,534 miles of roads had been added to the state system by counties. Meanwhile, he said, appropriations for maintenance have increased very little. The state is now confronted with the problem of maintaining more than 9,700 miles of roadway with appropriations sufficient for maintenance of only about 6,000 miles.

California highway funds amounting to $10,000,000 will be invested in short-term U. S. government bonds redeemable in one year, Chairman C. H. Purcell of the California Highway Commission has announced. The investment will earn $87,500 pending the time when the money will be needed to pay for highway construction.

Big hospital program approved by Senate

A bill (S. 191) authorizing a total federal appropriation of $375,000,000 for a 5-year hospital construction program was passed by the Senate Dec. 11. The measure authorizes an appropriation of $75,000,000 for the five years. The plan is to provide the first year's money at the start of the 1947 fiscal year July 1, 1946. However, passage of an appropriation bill will be required before the money actually becomes available.

The money will be spent through the U. S. Public Health Service to be matched by state or local funds. The construction aid for a given state will be allotted in accordance with a formula taking into consideration that state's population and the relation between its per capita income and the average national per capita income. Before work on a given project could be started, the plans would need to be approved by the Surgeon General's office.

In addition to the construction money the bill authorizes a total of $5,000,000 for surveys and the planning of statewide construction programs allotted on a basis of population.

OBITUARY

Stephen U. Hopkins, 73, engineer and contractor, who was in charge of the construction of the Fourth Avenue subway in New York City, died Dec. 11. He was graduated from Harvard University in 1897, and for the next two years was an instructor of engineering and hydraulics there. In 1900 he became assistant engineer of the New York City Rapid Transit Railroad Commission. He had charge of the construction of two sections of the original New York City subway.

In recent years Mr. Hopkins acted as consulting engineer and contractor on many large projects, including the Sixth and Eighth Avenue subways of the city-owned and operated Independent subway system.

During the war he had been retained, successively, by the Navy Department for supervision of construction of a large shipbuilding plant in Millington, N. J., and by the War Department as consulting and special engineer for important construction work in the Panama Canal Zone.

Edwin B. Donaldson, 58, partner for the last 15 years in the E. B. Donaldson & Bros. Co., Washington, D. C., paving contractors, died Nov. 27 in Washington. Mr. Donaldson had been in the paving business for the last 35 years.

William Fitzgerald, 64, chief engineer of the Cambridge, Mass., water department, died in Cambridge Dec. 6. He had been in the employ of the department for 30 years.

Maj. Roy Edgar Shelton, 50, former High Point, N. C., contractor who had been with the Army Engineering Corps for the last three years, died at San Juan, Puerto Rico, Dec. 4. In addition to his service with the Army Engineering Corps in Puerto Rico, Major Shelton also had served with the corps at Washington, D. C., Camp Sutton, N. C., Fort Belvoir, Va., and in Alabama.

Peter A. Hunrichs, 81, who prior to his retirement ten years ago had been a civil engineer for the city of Los Angeles, Calif., for 25 years, died Dec. 3.

Frank G. Jonah, 81, chief engineer of the Frisco Lines, and, as a major in the 12th Engineers, builders of American light railways in France in World War I, died in St. Louis, Mo., Dec. 7. He was assistant engineer of the Merchants' Bridge Terminal Railway for four years, and from 1894 to 1901 was in engineering work with the St. Louis, Peoria & Northern, now part of the Illinois Central, and of the Chicago & Alton, now the Alton Railroad. From 1901 to 1910 he was in the service of Oklahoma and Texas lines and of the New Orleans Terminal Co.

In 1910 Mr. Jonah became chief engineer of construction of the Frisco, and in 1913 chief engineer. In that position, he had charge of the important work of reconstruction done by the Frisco in central Missouri, and the linking and rebuilding of southern lines, one of them extending to Pensacola, Fla.

Charles C. Smith, 83, early day contractor, died recently in Kansas City, Mo. He was the general contractor on the city's General Hospital completed in 1908, the Main Library building, and many other well known structures. He retired almost twenty-five years ago.

Hyman H. Mandelzweig, 60, assistant engineer of design for the water department of Cleveland, Ohio, died Dec. 5. He took his engineering degree at Case School of Applied Science in 1909. After several years as an engineer for Cuyahoga County, more than 25 years ago he became a civil engineer in the city water department.

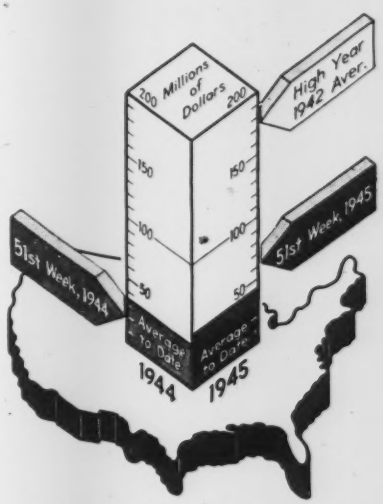
Clarence E. Butts, 66, member of a river-sounding party of the U. S. Engineers, was drowned when their motor boat capsized in the swollen waters of the Santiam River in Oregon on Dec. 6.

Charles B. Drexler, 66, for 19 years chief engineer of the Torresdale Pumping Station and an employe of the Philadelphia, Pa., bureau of water for 39 years, died Dec. 6.

John R. Helms, 54, executive vice-president of the Pennsylvania Housing and Town Planning Association died Dec. 3 at Swarthmore, Pa. He was technical adviser in the development of the $2,000,000 slum clearance project in Chester, Pa., a few years ago. He was a graduate of Drexel Institute of Technology and of the University of Pennsylvania.

William F. Strouse, 81, died at Braddock Heights, Md., Dec. 5. His last professional activity was as chief engineer of the Public Service Commission of Maryland, where he served from 1919 to 1931. He previously had been employed as an engineer by the Baltimore and Ohio Railroad and was one of the engineers in the construction of the Union Station in Washington.

CONSTRUCTION ACTIVITY



As Reported This Week to...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of Dec. 20 1945	Cumulative 1945 (51 wk.)	Cumulative 1944 (51 wk.)
Federal	$638	$743,094	$1,102,954
State & Mun.	11,562	393,231	243,771
Total Public	12,200	1,136,325	1,346,725
Total Private	51,568	1,126,825	359,878
U. S. Ttoal	**$63,768**	**$2,263,150**	**$1,706,603**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1945 (51 wk.)	Cumulative 1944 (51 wk.)
Waterworks	$820	$60,868	$33,249
Sewerage	1,177	34,421	31,846
Bridges	1,526	46,925	16,506
Highways	4,603	226,038	192,577
Earthwork, Waterways	206	56,357	63,966
Buildings, Public	2,616	462,692	643,537
Industrial	23,839	630,696	172,782
Commercial	23,298	374,943	138,418
Unclassified	5,683	369,443	413,722

NOTE: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1945 (51 wk.)	Cumulative 1944 51 wk.)
NON-FEDERAL		$433,303
Corporate Securities	New	110,419
State and Municipal		177,944
RFC Loans	data	61,940
REA Loans		20,000
Fed. Aid Highway	not	63,000
FEDERAL		1,263,800
	available	
Total Capital		1,697,103

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	Dec. '45	313.48	150.69
Building Cost	Dec. '45	240.82	130.18
Volume	Nov. '45	173	76

CONSTRUCTION REPORTS

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ELSIE EAVES, Manager *DARWIN R. DAY, Statistics* *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

BIDS ASKED

Bids Asked December 27

Conn., Middletown—State of Connecticut, Comptrollers Office, State Capitol. Hartford, watermain, chlorination plant, water sys., Connecticut State Hospital. $15,000. Extended date. CD 12/11—ENR 12/13.

Bids Asked December 28

Wash., Tacoma—City, Bd. Contrs. and Awards, City Hall, furnishing, del. 11,053 ft. 48 in. steel pipe or furnishing, installing same amount 48 in. rein.-con. pipe. Over $40,000. CD 10/6/43—ENR 10/14/43, under Postwar Projects.

Bids Asked January 7

Conn., Hartford—Bd. Contr. & Supply, Metropolitan Dist., 650 Main St., Zone 4, 36 in. Brown St. pipeline. Plans deposit $5; adv. ENR 12/20.

Bids Asked January 8

Ind., Bluffton—Bd. P. Wks., C. B. Arnold, clk., City Hall, WW and power imprvs., incl. 300,000 gal. elevated steel tank, and 1600 kw. Diesel engine and generator. $200,000. B. H. Freeland, City Hall, WW supt. CD 10/24—ENR 11/15.

N. Y., New York—Bd. Water Supply, 120 Wall St., Zone 5, Contr. 362, furnishing, testing, del. 2 electric motors for operating 60x54 in. gate valves, 10 electric motors for operating 48 in. gate valves and electrical control equip. for West Branch effluent chamber of Delaware Aqueduct.

Bids Asked January 15

N. Y., New York—Bd. Water Supply, 120 Wall St., furnishing, testing, del., cages electric hoists, hoist motors, cable sheaves, 2 lengths steel wire rope and one cable reel with electric cable, appurtenances, for shafts 6, 13, and 23 drainage chambers of Delaware Aqueduct, Contr. 356., adv. ENR 12/20. CD 6/16/44—ENR 6/29/44, under Postwar Projects.

LOW BIDDERS

Calif., San Diego—City, Civic Center Bldg., Dec. 5, installing 4,470 lin. ft. 16. in. Class 150 cement lined c.i. watermains, Units 1 and 2, from Carroll & Foster, 2260 Main St. $21,478. CD 11/21.

N. Y., New York—Dpt. Water Supply, Gas & Electricity, Municipal Bldg., Zone 7, Dec. 7, pump stations adjacent to Wantagh No. 2, Massapequa No. 2, Watts Pond and Clear Stream Pump. Stations, along Sunrise Hy., Nassau Co., from P. Centofante, 237-14 92 Rd., Belrose Manor. $87,359. CD 11/23—ENR 11/29.

Ore., Portland—City, City Hall, Dec. 4, furnishing 30,500 ft., 6 to 12 in. c. i. pipe for maintenance work, from U. S. Pipe & Foundry Co., Burlington, N. J. $60,965.

★**Tex., Dallas**—City, E. Goforth, secy., City Hall, Dec. 19, Bachman Water Purification Plant addns., imprvs., from T. C. Bateson Co., Irwin-Keasler Bldg., $2,058,000; 500,000 gal. tank on steel tower, from Pittsburgh-Des Moines Steel Co., Praetorian Bldg., $51,860. Myers & Noyes, Tower Petroleum Bldg., engrs. CD 11/20—ENR 11/29.

Tex., Houston—Harris Co. Fresh Water & Imprvt. Dist. 16, Court House, project abandoned, WW sys. imprvs. $150,000. J. C. Calhoun, Jr., Houston Merch. Exchange Bldg., consult. engr. CD 10/22—ENR 11/1.

Wash., Seattle—City, County-City Bldg., 3 and James Sts., Zone 4, Dec. 6, 19,000 ft. 8-to 30-in. c. i. pipeline, S Ave. S. W., from M. Moschetto, 5501 13 Ave. S., $254,934. Est. $253,360. CD 11/28.

Wash., Tacoma — City, Bd. Contrs. & Awards, City Hall, 4 and 16 in. watermains, Local Imprvt. Dist. 5173, from Valley Constr. Co., 7708 Rainier Ave., Seattle. $57,099.

CONTRACTS AWARDED

†**Calif., Corona**—Naval Operating Base, Terminal Island, 3 water wells, water supply main, transmission line at U. S. Naval Hospital, to T. L. Gogo, 10024 S. Figueroa St., Los Angeles. $89,955. Bids 10/11. CD 8/31—ENR 9/6.

Minn., St. Louis Park—Village, J. Justad, clk., Village Hall, watermain, piping, etc., for reservoir, to Lametti & Lametti, 615 Drake St., St. Paul, $59,963. CD 1/3/44—ENR 1/13/44, under Postwar Projects.

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

O., Logan—City, WW imprvs., consisting water softening addns. to filtration plant and installing approx. 1,800 meters in outside settings, to Geiger Bros., 473 N. Spring St. $88,129. Bids 10/19. Burgess & Niple, 568 E. Broad St., Columbus, engrs.

Tex., Crystal City—California Packing Corp., 101 California St., San Francisco, Calif., and Crystal City, c. i. water lines, to Wahrmund-Logan Co., 422 Hays St., San Antonio, approx. $15,000. Geo. Van Vlack, P. O. Box 818, engr.

Tex., Goose Creek—B. B. Williams, Goose Creek, c. i. water distr. lines, own forces, $18,000. CD 8/1—ENR 8/9, under Postwar Projects.

Tex., Whitesboro—City, City Hall, drilling, developing 1,400 ft. water supply well, to Layne-Texas Co., 3903 Elm St., Dallas. $16,000.

Utah, Nephi—City, City Hall, 400,000 gal. rein.-con. storage reservoir, to Young & Smith, 507 Beason Bldg., Salt Lake City. $16,250. Bids 11/19. CD 11/1—ENR 11/29.

Wash., Walla Walla—City, C. W. Martin, city street comr., drilling well, to A. A. Durand & Sons, Walla Walla. $17,301. G. C. Cookerly, city engr.

B. C., Kamloops—Dpt. Veteran's Affairs, Veteran's Land Act, Rogers Bldg., Vancouver, exten. watermains, to General Constr. Co., Ltd., Granville Island, Vancouver. $15,800. CD 11/27—ENR 12/13

SEWERS, WASTE DISPOSAL

BIDS ASKED

Bids Asked December 27

Ill., Chicago—Sanitary Dist. of Chicago, 910 S. Michigan Ave., furnishing, installing piping, ducts and mechanical equip. Southwest Sewage Treatment Works, Contr. 45-27 (SW-M).

Bids Asked After January 1

Tex., Alamo—City, City Hall, sanitary sewers. $90,000. A. Tamm, 107 S. 1 St., Harlingen, engr. CD 9/26—ENR 10/18.

Bids Asked January 2

★**Calif., Oildale**—North of the River Sanitary Dist. 1, Court House, Bakersfield, vitr. clay sanitary sewage collection sys., pump. station and treatment plant here and in adjacent communities. Plans deposit $50. CD 11/23—ENR 12/12.

Bids Asked January 9

Mass., Boston—At office Metropolitan Dist. Water Supply Comn., R. N. Molt, secy., 20 Somerset St., Contr. 142, furnishing, del. grit and sludge removal equipment, bar screens, and comminutors for Nut Island Sewage Treatment Plant, of South Metropolitan Sewerage Dist., in Quincy. Plans deposit $10. K. R. Kennison, ch. engr. Comn.; adv. ENR 12/20. CD 5/12/44—ENR 6/1/44, under Postwar Projects.

O., Macedonia—State Dpt. P. Wks., F. L. Raschig, dir., State Office Bldg., Columbus, sanitary sewer, new tunnel at Hawthornden State Hospital. T. P. Brand, State Office Bldg., Columbus, state archt.

LOW BIDDERS

Calif., Los Angeles—Los Angeles Co., Hall of Records, Dec. 11, sanitary sewers in Ira Ave., etc., C. I. No. 1117, from Burch & Bebek, 2803 Los Flores Blvd., Lynwood. $76,721. CD 10/25—ENR 11/15.

Calif., Signal Hill—City, City Hall, Dec. 3, rein.-con., brick incinerator, from Municipal Incinerator Co., 3406 W. Washington Blvd., Los Angeles. $31,823. CD 10/15—ENR 10/18.

La., Plaquemine—Police Jury of Iberville Parish, Court House, rejected bids Dec. 11, sanitary sewerage sys., for Sewerage Dist. 1, Voorhies & Smith, 3000-A, Dalrymple Dr., Baton Rouge, engrs. CD 11/21—ENR 11/29.

Minn., Duluth—City, C. D. Jeronimus, clk., City Hall, Nov. 26, 48 in. relief sanitary sewer, in 21 Ave. W. from Michigan St. to the Bay and 1 addnl. sluice gate in 22 Ave. W. near Michigan St., from Polaris Concrete Products Co., 6010 Medina St. $33,089. CD 5/26/43—ENR 6/3/43, under Postwar Projects.

Tex., Dallas—City, City Hall, storm sewers in Clarendon Dr., from P. C. Sorenson Co., Southland Life Bldg. $55,347.

Tex., Dallas—City, E. Goforth, secy., City Hall, Dec. 12, storm sewer imprvs. in Lemmon and Herschel Sts., from Loma Alto Dr. to north of Gilbert St., from O. J. Parrott Constr. Co., Tower Petroleum Bldg. $45,794. CD 12/10.

Tex., Houston—City, M. H. Westerman, secy., City Hall, Dec. 12, storm sewerage sys., Lum Terrace, Greenway, Unit 1, from R. P. Farnsworth & Co., 506 Bankers Mortgage Bldg., $67,859; storm sewer outfall for Southgate Addn. 5, from Thos. Bate & Sons, 1107 Giard St., $62,300. CD 5/23—ENR 5/31.

Tex., Houston—Harris Co. Fresh Water & Imprvt. Dist. 16, Court House, project abandoned, sewer imprvs. $125,000. J. C. Calhoun, Jr., Houston Merch. Exchange Bldg., consult. engr. CD 10/22—ENR 11/1.

CONTRACTS AWARDED

Neb., Omaha—City, office M. J. Dineen, city clk., sewers between Parker St. and Lafayette Ave., to Omaha Dredge & Dock Co., 808 Douglas St. $25,093. Bids 12/4.

★**N. Y., Kew Gardens**—President Queens Boro, 120-55 Queens Blvd., Zone 15, storm trunk sewer, appurtenances in City-owned land in prolongation of 223 St., to A. Catapano, 88-36 88 Ave., Glendale. $526,738. Bids 10/26. CD 10/29—ENR 11/1, under LB.

Ont., Bowmanville—Town, A. J. Lyle, clk., rein.-con. Bio-filter plant of 5 units; 2 clarifier units, 4 ft. drain.; 1 filter unit, 60 ft. drain.; pump house; enclosed rein.-con. unit, 28 ft. drain. to Toronto Constr. Co., 32 Elsfield Rd., Toronto. Approx. $80,000.

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